GHS Classification

ID1007 Mevinphos

CAS 7786-34-7 Date Classified: Jul. 24, 2006 (Environmental Hazards: Mar. 31, 2006)

Physical Hazards Reference Manual: GHS Classification Manual (Feb. 10, 2006)

	Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1	Explosives	Not applicable	–	–	–	There are no chemical groups associated with explosive properties present in the molecules.
2	Flammable gases	Not applicable	–	–	–	Liquid (GHS definition)
3	Flammable aerosols	Not applicable	–	–	–	Not aerosol products
4	Oxidizing gases	Not applicable	–	–	–	Liquid (GHS definition)
5	Gases under pressure	Not applicable	–	–	–	Liquid (GHS definition)
6	Flammable liquids	Category 4	–	Warning	Combustible liquid	Flash point: 79.5degC
7	Flammable solids	Not applicable	–	–	–	Liquid (GHS definition)
8	Self-reactive substances and mixtures	Type G	–	–	–	UNRTDG Non-hazardrous Substance
9	Pyrophoric liquids	Not classified	–	–	–	Not ignite spontaneously on coming into contact with air at normal temperatures
10	Pyrophoric solids	Not applicable	–	–	–	Liquid (GHS definition)
11	Self-heating substances and mixtures	Classification not possible	–	–	–	Test methods applicable to liquid substances are not available
12	Substances and mixtures, which in contact with water, emit flammable gases	Not classified	–	–	–	Stable to water
13	Oxidizing liquids	Classification not possible	–	–	–	No data available
14	Oxidizing solids	Not applicable	–	–	–	Liquid (GHS definition)
15	Organic peroxides	Not applicable	–	–	–	Containing no -O-O- structure
16	Corrosive to metals	Classification not possible	–	–	–	No data available

Health Hazards

	Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1	Acute toxicity (oral)	Category 1	Skull and crossbones	Danger	Fatal if swallowed	Category 1 based on SPECIES: Rat; ENDPOINT: LD50; VALUE: :3.4mg/kg and 6.0mg/kg (ACGIH, 2003), 6.0-7.0mg/kg (PATTY 4th, 1994), Calculated VALUE: 4.3mg/kg;
1	Acute toxicity (dermal)	Category 1	Skull and crossbones	Danger	Fatal in contact with skin	Rat LD50 value = 4.2mg/kg (ACGIH, 2003), rabbit LD50 value= 33.8mg/kg (ACGIH, 2003) and approximately 34mg/kg (PATTY 4th, 1994). The lower rat LD50 value was adopted and it was set as Category 1.
1	Acute toxicity (inhalation: gas)	Not applicable	–	–	–	Liquid (GHS definition)
1	Acute toxicity (inhalation: vapour)	Classification not possible	–	–	–	No data available
1	Acute toxicity (inhalation: dust, mist)	Category 1	Skull and crossbones	Danger	Fatal if inhaled	Calculated on based on rat LC50 (1 hour) value: 14.4ppm (4-hour equivalent 0.0329mg/L) and 0.0098mg/L (4-hour equivalent 0.0025mg/L) (ACGIH, 2003), approximately 14ppm (4-hour equivalent 0.032mg/L) (PATTY 4th, 1994). Since the calculated values were 0.00609mg/L, they were set to category 1.
2	Skin corrosion / irritation	Classification not possible	–	–	–	Classification not possible due to lack of data
3	Serious eye damage / eye irritation	Classification not possible	–	–	–	Insufficient data available.
4	Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Classification not possible	–	–	–	Respiratory organ: No data. Skin: Since data was insufficient, we could not classify it.
5	Germ cell mutagenicity	Not classified	–	–	–	There is a negative result (JMPR, 1996) by the dominant lethal test using the mouse which is an in vivo multigeneration mutagenicity test using a germ cell, and the chromosome aberration test using a mouse marrow cell which is the in vivo mutagenicity test using a somatic. So it carried out the outside of Category.
6	Carcinogenicity	Not classified	–	–	–	Since it was classified into A4 (ACGIH, 2003) in ACGIH, it was considered as the outside of Category.
7	Toxic to reproduction	Not classified	–	–	–	It was considered as out of Category based on the description that there was no reproductive toxicity at the two-generation reproduction study using a rat (ACGIH (2003)), and the description that in the developmental toxicity test using rat and rabbit, even at the dose in which the neurotoxicity by cholinesterase inhibition is observed in dam, developmental toxicologies was not observed.

8	Specific target organs/systemic toxicity following single exposure	Category 1 (nervous system)	Health hazard	Danger	Cause damage to organs (nervous system)	The substance was classified as Category 1(nervous system) based on a report of neurological symptoms caused by the inhibition of cholinesterase activity in oral and percutaneous exposure cases in humans (ACGIH (2003)).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (nervous system)	Health hazard	Danger	Causes damage to organs (nervous system) through prolonged or repeated exposure	We classified it into Category 1 (nerve systems) based on the description that the neurological symproms oweing to cholinesterase activities inhibition were observed with the dose of the guidance value range of Category 1in the feeding oral administration tests using the rat and dog (ACGIH (2003)), and based on the description that the effects on the nerve systems was observed in the 28-day oral study with a low-dose for the humans (ACGIH (2003)).
10	Aspiration hazard	Classification not possible	-	-	-	No data available

Environmental Hazards

Hazard class		Classification	symbol	signal word	hazard statement	Rational for the classification
11	Hazardous to the aquatic environment (acute)	Category 1	Environment	Warning	Very toxic to aquatic life	It was classified into Category 1 from 96-hour LC50=2.8microg/L of Crustacea (Amphipod)(HSDB, 2004).
11	Hazardous to the aquatic environment (chronic)	Category 1	Environment	Warning	Very toxic to aquatic life with long lasting effects	Classified into Category 1, since acute toxicity was Category 1, rapid degradability is unknown, though suppsed less bioaccumulative (log Kow=0.13 (PHYSPROP Database, 2005)).